

FIN 500R Exam

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This is a closed-book examination. You may not use texts, notes, a crib sheet, calculator, cell phone, listening device, or any other electronics.

Answer 10 questions ONLY on the Blue Books provided. Be sure your answers and choice of which questions count are clearly marked. There will be a penalty (only the lowest 10 scores will count) if you answer more. There are no trick questions on the exam, but many of the questions are relatively unstructured (like most questions you will get in practice) and do not have a unique answer.

Answers should be short and concise, and should include no more than a sentence or two of normal length. Long answers will be penalized in the grading (and in extreme cases ignored). To the extent possible, answers should be designed to be understandable by non-specialists. In the case of an intrinsically technical question, an appropriate answer might include an initial nontechnical sentence (which may be imprecise), followed by a more precise technical definition.

All questions have equal weight in the scoring.

Good luck!

0. PLEDGE

The work on this exam is my own alone, and I have conformed with the rules of the exam and the code of the conduct of the Olin School.

Signed name _____

Bubbles, Doubling Strategies, and Suicidal Strategies

1. (a) What is a bubble in an asset market?
(b) Do you believe there was a bubble in the US real estate market leading up to the recent financial crisis? Why or why not?
2. (a) In Karl Shell's simplified version of Samuelson's consumption-loan model, competitive equilibrium is inefficient. What is the nature of the inefficiency?
(b) Introducing an asset with a bubble can produce an equilibrium that fixes the inefficiency. What is the asset and why is it a bubble?
3. (a) What is a suicidal strategy?
(b) What is the connection between a suicidal strategy and bubbles?
4. (a) Heston, Loewenstein, and Willard show that for some parameter values, the CEV model of option pricing has a very strange bubble in what asset?
(b) What would you interpret as evidence for a bubble in practice? Why?

Macroeconomics and Asset Pricing

5. (a) Is the real interest rate in the US currently positive or negative?
(b) According to RBC models, what does the sign of the real interest rate indicate about expectations of market participants? Do you believe this implication? Why or why not?

Understanding the Financial Crisis

6. (a) According to Gorton and Metrick's review, what is the key antecedent to many banking crises?
(b) Did the growth of shadow banking contribute to the crisis? How?
7. (a) What is Asset-Backed Commercial Paper (ABCP)?
(b) In the crisis, there were many runs on ABCP. What does this mean?

Pricing Credit Derivatives

8. (a) What is the difference between structural and reduced-form models of credit?
(b) What is the comparative advantage of each?
9. (a) In a reduced-form model of pricing corporate debt, what is the default rate? What is the recovery rate?
(b) Is it better to model the recovery rate as a fraction of the market value of debt or as a fraction of the face value of debt? Why?
10. (a) What is a credit default swap (CDS)?
(b) What is the CDS spread?

Log Optimal Policies: the "Kelley Rule"

11. (a) Over time, the log-optimal strategy (Kelley Rule) eventually outperforms any significantly different strategy. Does this imply this is a good strategy for everyone?
(b) Do you believe the Kelley rule is a reasonable strategy for a typical investor? Why or why not?

Trading

12. (a) What is the primary statistical tool recommended by Lo, Mamaysky and Wang in their paper on the foundations of technical analysis?
 - (b) Are you convinced that the tools they recommend are useful? Why or why not?
13. (a) According to Pagnotta and Philippon's paper "Competing on Speed," does increasing the speed of the market increase welfare?
 - (b) In your opinion, do extreme reductions in trading times make the economy better off? Why?

Investing with Transaction Costs

14. (a) Qualitatively, what is the difference between the optimal trading strategy with fixed costs and the optimal trading strategy with variable costs?
 - (b) Do you think transaction costs are an important consideration for investors or are they secondary to other considerations? Why?

Are Financial Markets too Big?

15. (a) Bolton, Santos, and Scheinkman have a model with transparent standard exchanges and opaque OTC markets. In their model, the financial sector is too big and makes too many rents. Why?
 - (b) Do you believe financial markets are much too big? Why or why not?

Portfolio Insurance

16. (a) If markets are efficient, is there a problem with putting money with a manager who is trying to time the market but is actually just changing the proportions of risky and riskless assets randomly?
- (b) Do you think it is a good idea to put your money with an active manager? Why or why not?

Export-led Growth

17. (a) Song, Storesletten, and Zilibotti argue that China's accumulation of currency reserves is a by-product of which institutional features of the Chinese market?
- (b) Do you believe that China intentionally kept its currency cheap to stimulate exports, or do you believe this was an unintended by-product of other policies and institutions? Why?

Risk Management

18. (a) Name a feature of hedge accounting that makes it difficult to put in place a good economic hedge.
 - (b) Do you think the push towards market-value accounting will make hedging more attractive? Why or why not?
19. (a) What is a cash-balance pension plan?
 - (b) In your opinion, does investing in the security underlying the crediting rate (e.g. 3-year Treasuries) provide a good hedge for the plan's liabilities? Why or why not?

Investing for Retirement

20. (a) The base model in Dybvig and Liu has a fixed wage rate. With this assumption, should people work longer in good markets or in bad markets?
- (b) Do you believe it is a good idea to follow the traditional advice that young people should have a relatively aggressive investment portfolio? Why or why not?

Cash Management

21. (a) What is cash management in a company?
- (b) In your opinion, what is an important trade-off in cash management? Why?